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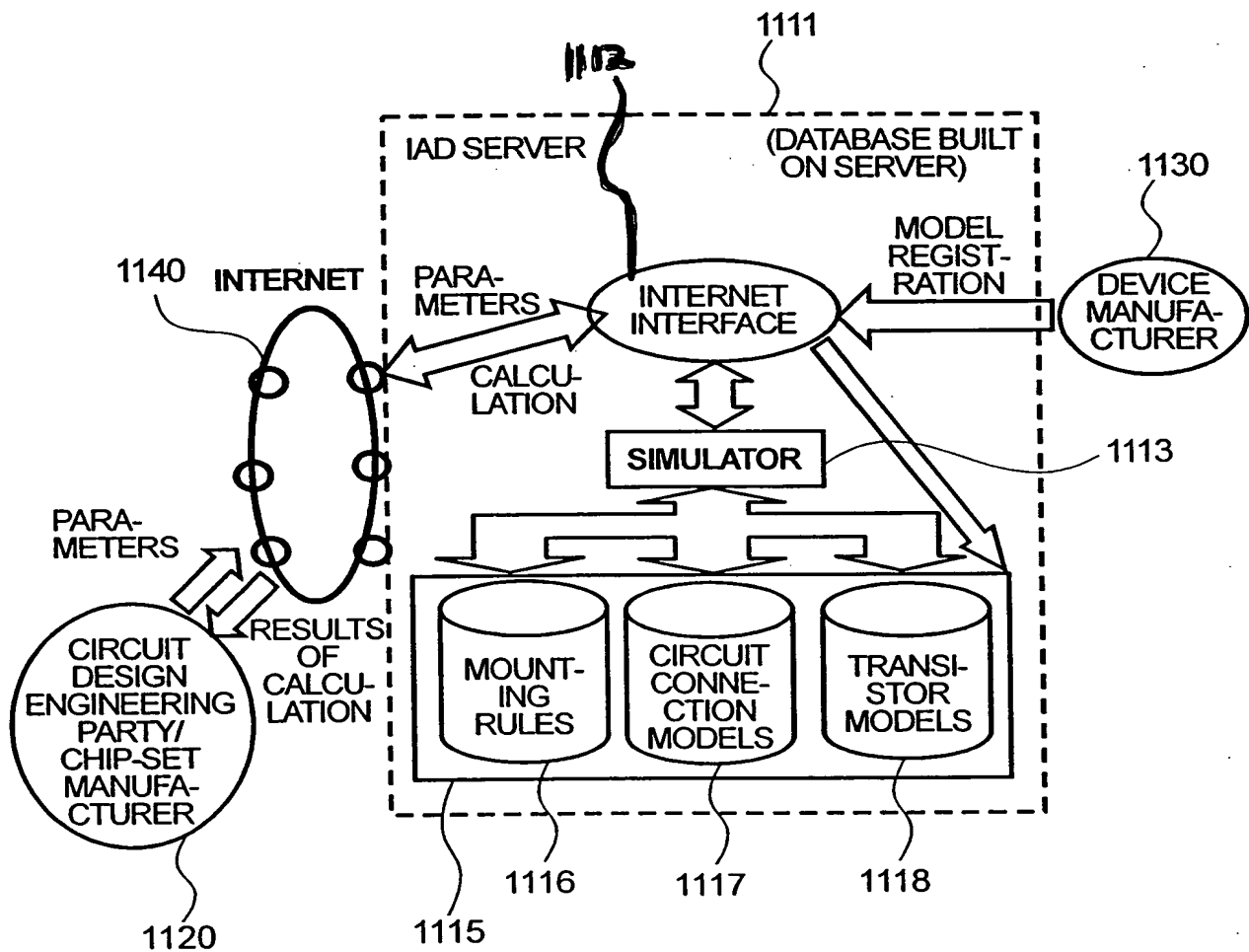
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FIG.1
SYSTEM CONFIGURATION



INVENTOR'S CERTIFICATE
U.S. PATENT & TRADEMARK OFFICE
WASHINGTON, D.C. 20540

FIG.3
EXAMPLE OF ENTRY SCREEN

Welcome to Web PCB Simulation

Last Modified at December 13, 2000

- Circuits Simulation on WEB
- SPICE - JAVAscript / CGI connection technology
- SPICE transistor model available
- IBIS also available
- Transmission line analysis
- Signal Integrity analysis
- EMC simulation

Please Select the Circuit model

1. Single Transmission Line
2. Differential Signal Lines
3. Bus Lines
4. Crosstalk
5. EMC Noise
6. Switching Noise
7. others

FIG.4

EXAMPLE OF USER REGISTRATION

Welcome to
Web PCB Simulation

Last Modified at December 13, 2000

- Circuits Simulation on WEB
- SPICE - JavaScript / CGI connection technology
- SPICE transistor model available
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- Transmission line analysis
- Signal Integrity analysis
- EMC simulation

Please Select the Circuit model

1. Single Transmission Line
2. Differential Signal Lines
3. Bus Lines
4. Crosstalk
5. EMC Noise
6. Switching Noise
7. others

Input username and password

Enter a user name for Barong

User name:

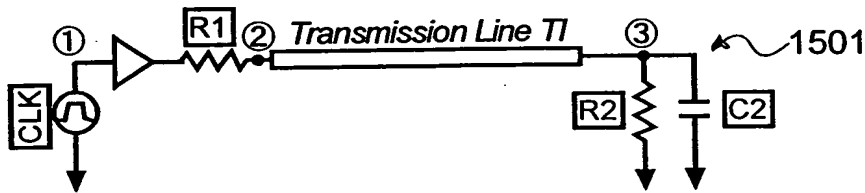
Password:

1405

1300

FIG.5
EXAMPLE OF CIRCUIT
PARAMETER INPUT SCREEN

Web SPICE - Spider -

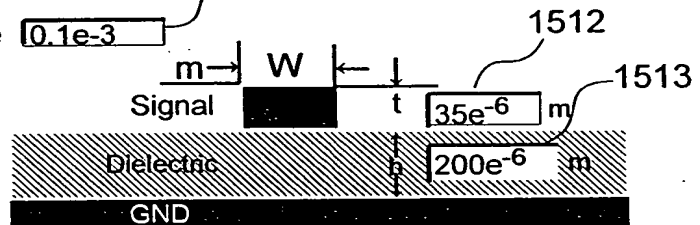


Set the parameters below.

- Clock CLK MHz ~ 1502
- Transceiver TX ~ 1503
- Resistor R1 Ω ~ 1504
- Resistor R2 Ω ~ 1505
- Capacitor C2 F ~ 1506
- Transmission Line

Line Type : ☒ Microstrip Line ~ 1511

Line length mm ~ 1516



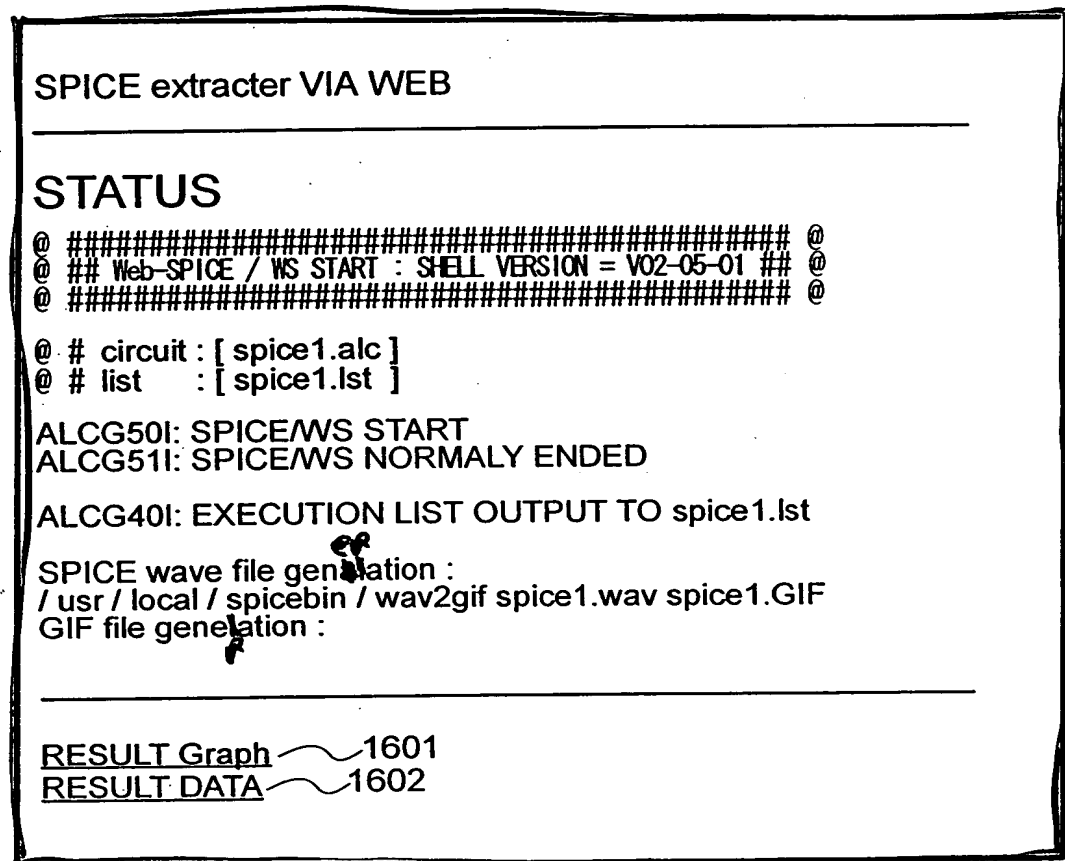
Dielectric Constant ϵ_r ~ 1514

Permeability μ_r ~ 1515

GO!(SPICE) ~ 1520

FIG.6

EXAMPLE OF CALCULATION STATUS SCREEN



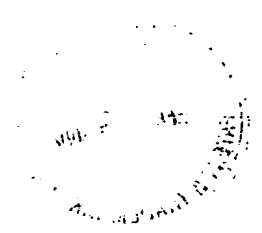
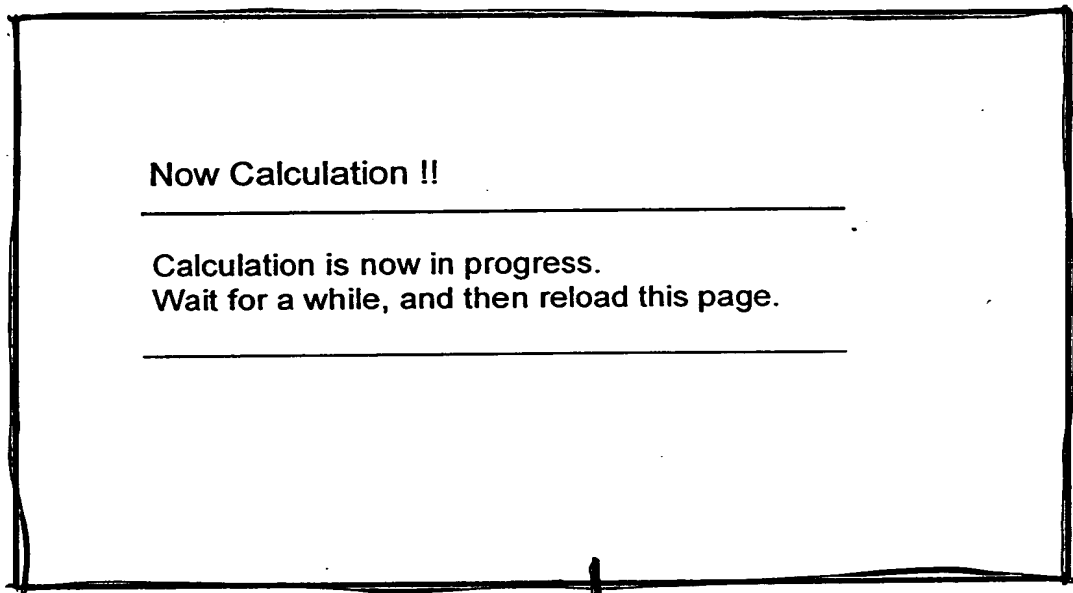


FIG.7

EXAMPLE OF CALCULATION RESULT SCREEN
DISPLAYED IN THE COURSE OF CALCULATION



1704

FIG.8

EXAMPLE OF CALCULATION RESULT
SCREEN DISPLAYED AT THE END OF CALCULATION

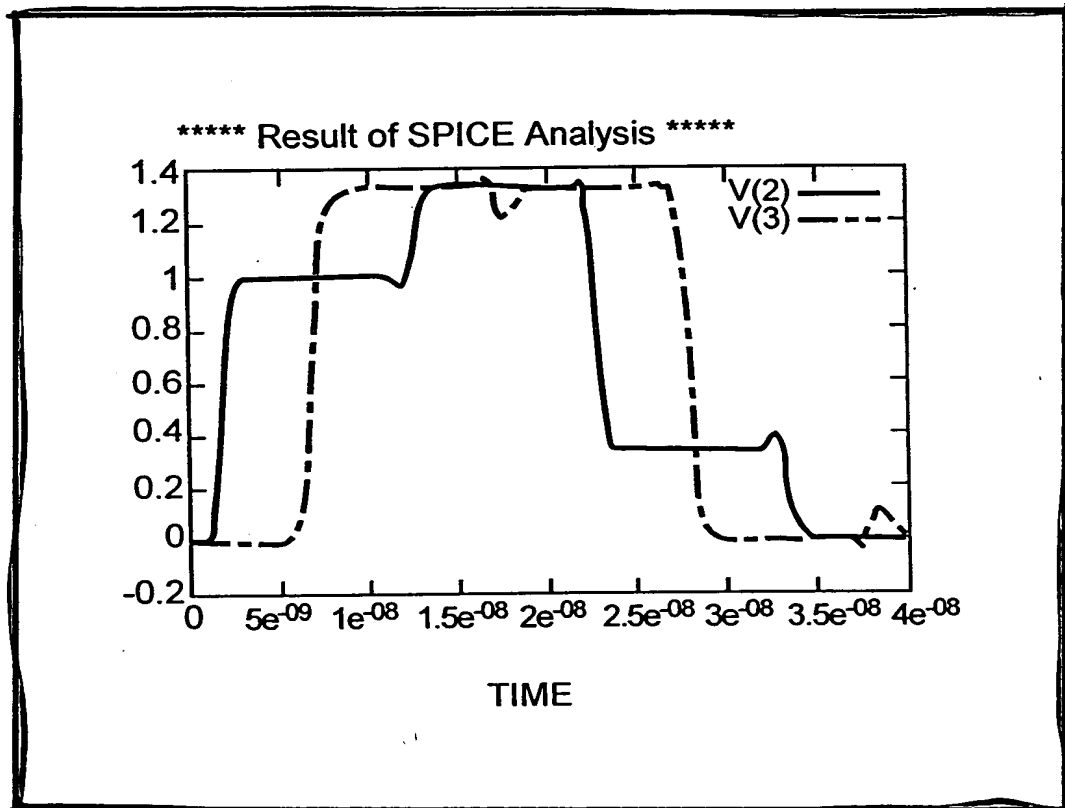


FIG.9

CONVENTIONAL SYSTEM CONFIGURATION

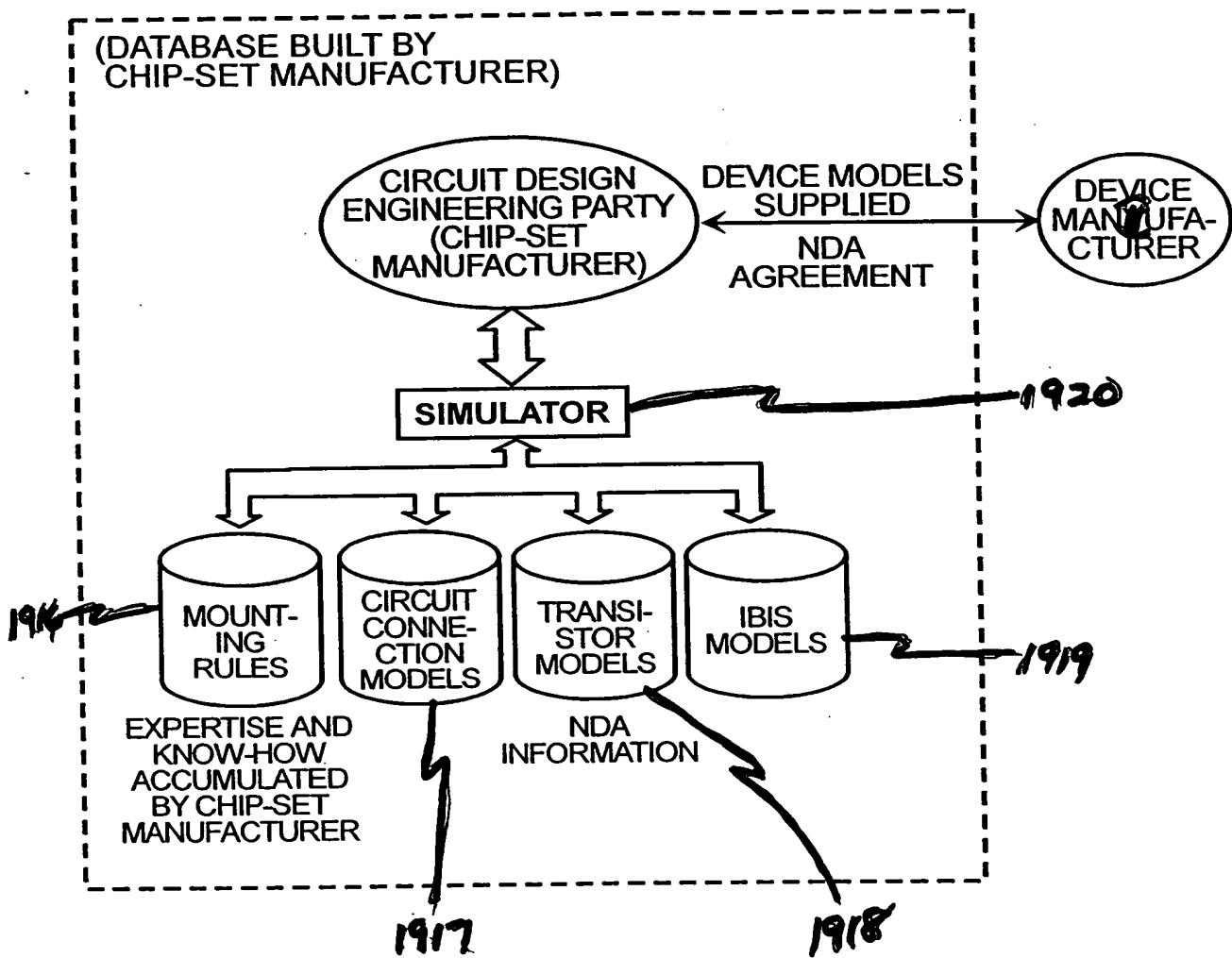
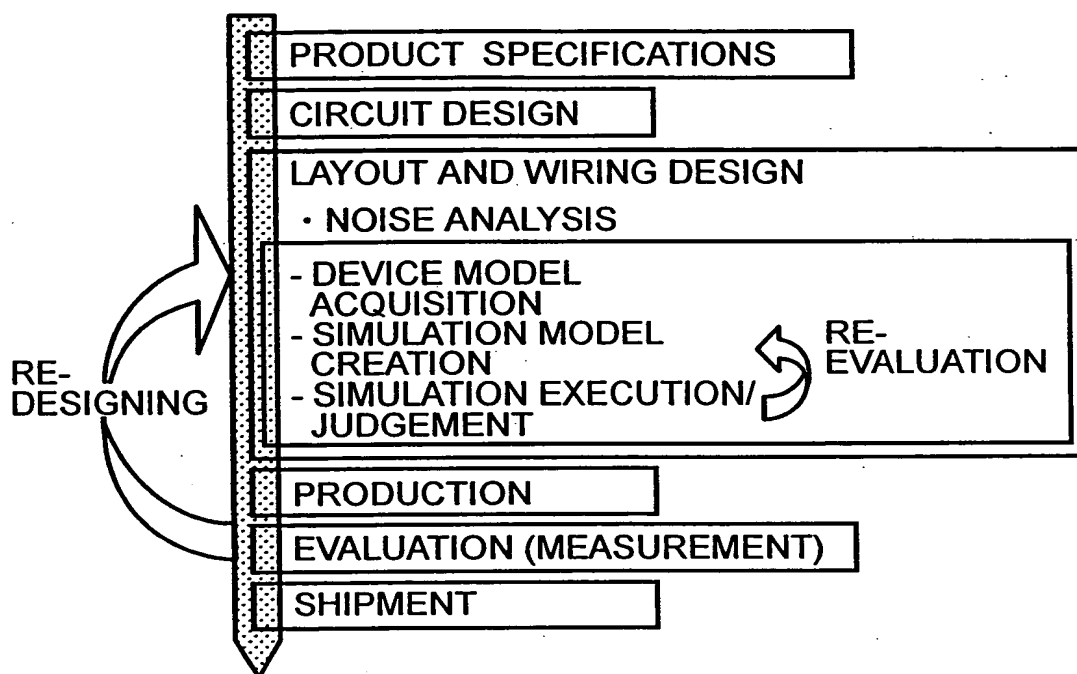


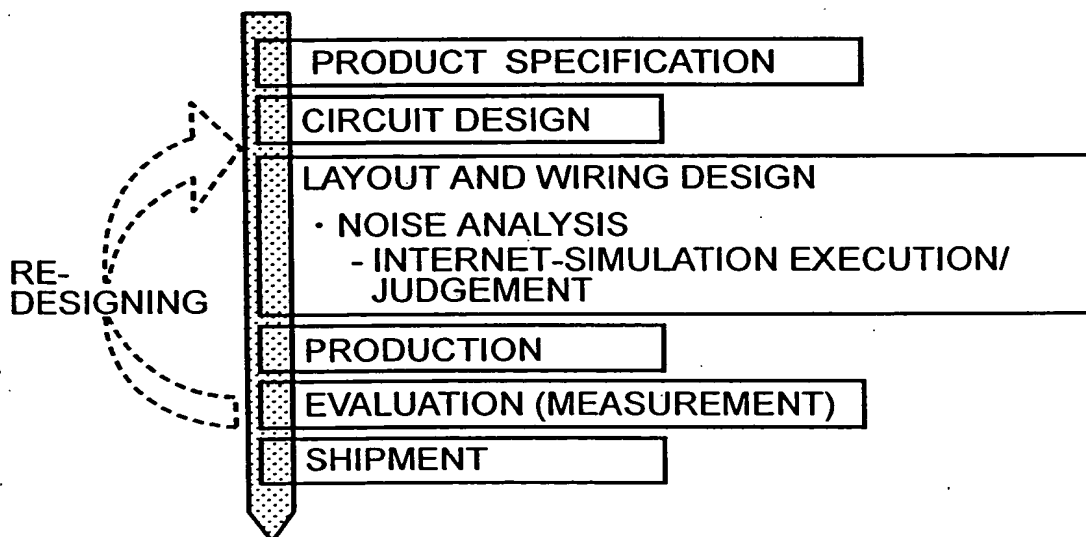
FIG. 10(a)

DESIGN FLOW AT CHIP-SET MANUFACTURER
(CIRCUIT DESIGN ENGINEERING PARTY)



~~FIG. 10(a)~~ CONVENTIONAL DESIGN METHOD

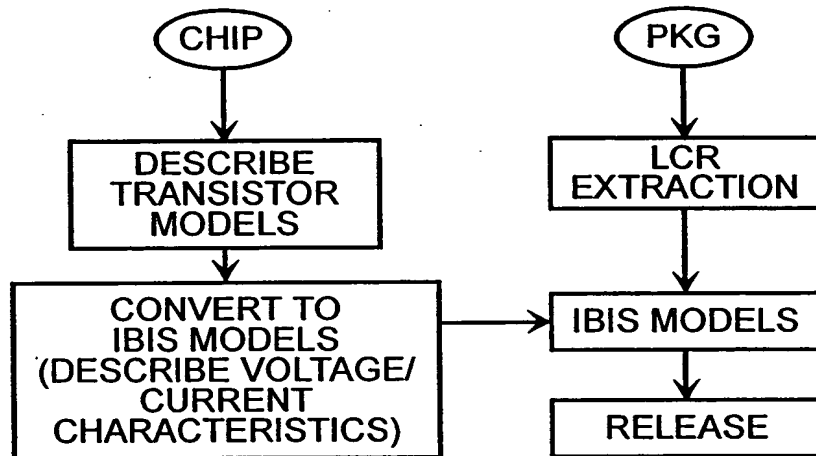
FIG. 10(b)



~~FIG. 10(b)~~ DESIGN METHOD ACCORDING TO THE
PRESENT INVENTION

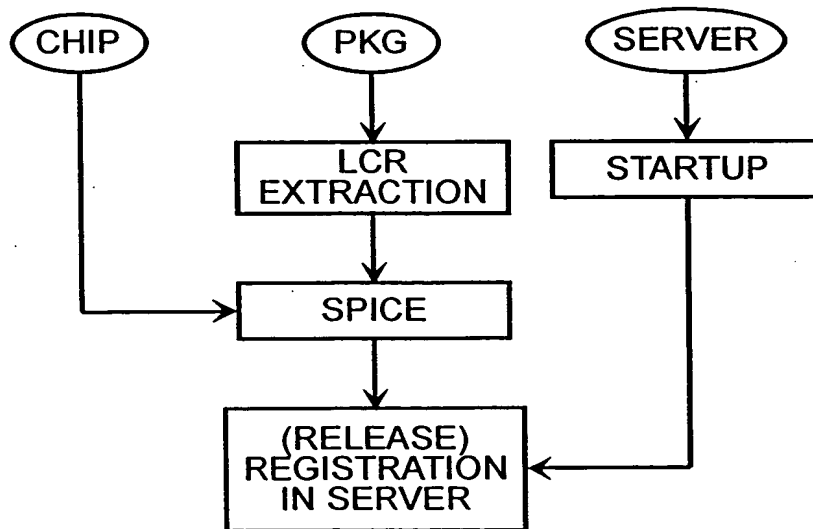
FIG.11(a)

MODEL PRODUCING FLOW AT MODEL SUPPLIER



~~CONVENTIONAL~~ CONVENTIONAL DESIGN METHOD

FIG. 11(b)



~~DESIGN METHOD~~ DESIGN METHOD ACCORDING TO THE PRESENT INVENTION

1000

SYSTEM CONFIGURATION IN A SECOND PREFERRED EMBODIMENT

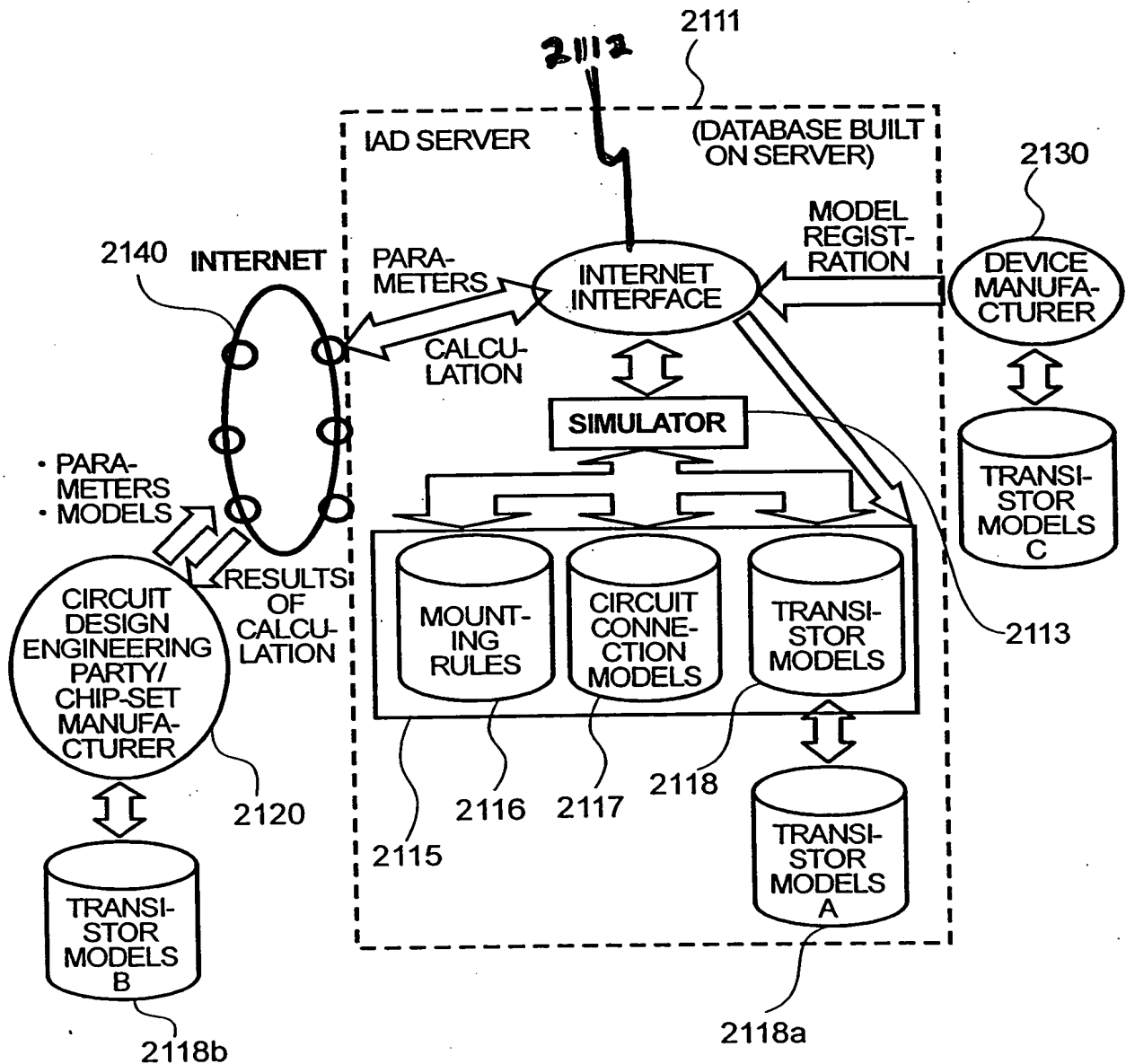
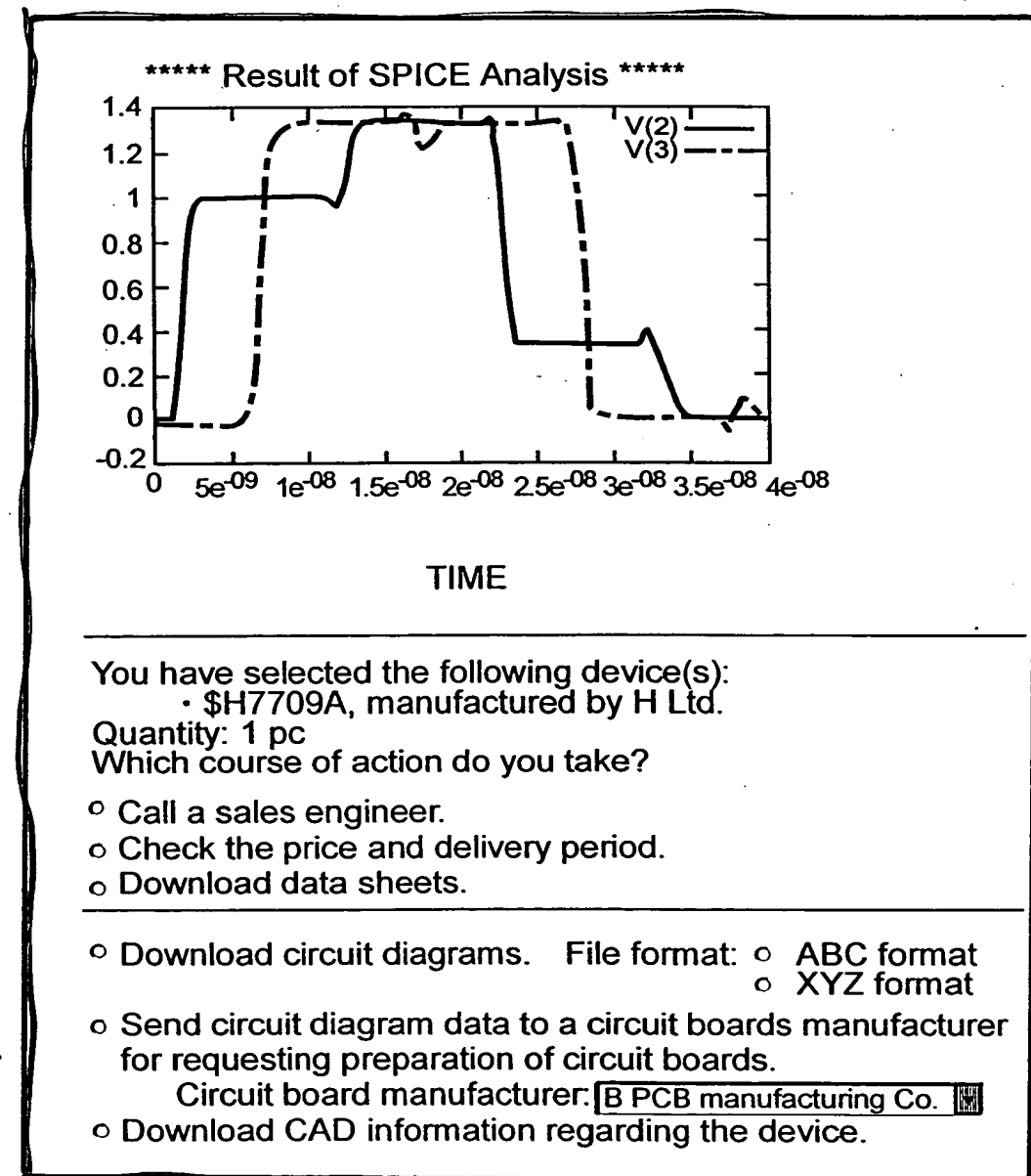


FIG.14

**EXAMPLE OF CALCULATION RESULT AND
DEVICE INFORMATION SCREEN**



Approved for